

Nuclear Division News



A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 7, No. 23/ November 11, 1976

OWI sets information meet at Museum, December 7, 8

An information meeting on the National Waste Terminal Storage program will be held December 7-8 at the American Museum of Atomic Energy. The meeting is being sponsored by the Office of Waste Isolation of the Nuclear Division.

The purpose of the meeting is to report on program progress during the period from April 1, 1975 through September 30, 1976, according to Clayton D. Zerby, Director of the Office of Waste Isolation.

The National Waste Terminal Storage Program was established by the Energy Research and Development Administration. Responsibility for the technical management of the program has been given to the Office of Waste Isolation.

The objective of the program is to provide terminal storage facilities for commercial radioactive waste in various geological formations at

multiple locations throughout the country. Present plans are to construct six repositories. The initial capacity of a repository would be limited, but the intent is to expand to full scale operation as soon as performance results have proved to be satisfactory. It is planned that initial operation of the first two repositories would start in the mid-1980's.

The information meeting will start at 8:30 a.m. on Tuesday, December 7, and continue through 1:30 p.m. Wednesday, December 8. The schedule for the first day will include an overview of the program plus presentations on such subjects as schedules and controls, facility projects, systems studies, regulatory affairs and technical support. The second day will be devoted to geologic studies.

The meeting is open to the public. However, because of the limited capacity of the auditorium at the American Museum of Atomic Energy, those who will attend the meeting are asked to contact the Office of Waste Isolation as soon as possible to facilitate planning. Inquiries should be addressed to Lowell L. McCauley, Office of Waste Isolation, P. O. Box Y, Oak Ridge 37830. Telephone 615-483-8611, extension 3-7204.

Zerby to address next Bimonthly Colloquium

Oak Ridge National Laboratory's next Bimonthly Colloquium will be held at the ORNL Central Auditorium at 3 p.m. Tuesday, November 16, with closed circuit television in the East Auditorium.

Clayton D. Zerby, director of the Office of Waste Isolation, will discuss "An Overview of the National Waste Terminal Storage Program." The Office of Waste Isolation has program management responsibility for terminal storage of radioactive wastes resulting from the reprocessing of commercial power reactor fuel.

Following the technical presentation, Laboratory director Herman Postma will comment on "ERDA's New Look at the Basic Sciences," after which he will answer questions from the floor on this and other topics of general interest. Employees not wishing to ask questions from the floor may submit signed questions in advance to George F. Flanagan, Building 6025.



William S. Sneath, right, has been elected chairman of the board and chief executive officer of Union Carbide Corporation. Succeeding him as president and chief operating officer of the company will be Warren M. Anderson, left, now an executive vice president. The elections followed the decision by Perry Wilson, current board chairman and chief executive officer to take early retirement. The officers take their new assignments January 1.

New corporate officers elected by UCC board

Perry Wilson has announced his decision to retire as chairman of the board and chief executive officer of Union Carbide Corporation, effective December 31, 1976, after more than 35 years of service.

Wilson also announced that the Union Carbide board has elected William S. Sneath, now president and chief operating officer, to succeed him as chairman and chief executive officer, and Warren M. Anderson to succeed Sneath as president and chief operating officer of the company, both effective on January 1, 1977.

Wilson will continue as a member of the company's board of directors. In his 35 years with Union Carbide, Wilson rose through a variety of positions to become president and director in 1969 and chairman and chief executive officer in 1971. At that time, the company's total assets were \$3.5 billion; they are now more than \$6 billion. Net sales rose from \$3 billion in 1971 to \$5.7 billion in 1975. Earnings increased from \$153 million in 1971 to \$382 million last year, and dividends rose from \$2 per share to the present rate of \$2.50 as a result of four increases in five years.



Wilson

In announcing his decision, Wilson said he had planned for some time to retire early. "I am pleased that stockholders, employees, and customers can have a great deal of confidence in the highly competent, strong management group under the leadership of Sneath and Anderson," Wilson stated.

Sneath joined Union Carbide in 1950, initially in the accounting and finance department. In 1961, he became treasurer of the corporation. He was elected a vice-president in 1965 and was designated as chief financial officer. He was elected a director in 1969 and president and chief operating officer in 1971.

Anderson joined Union Carbide in 1945. He was appointed a vice-president in the chemicals group in 1962, and successively served as senior vice-president of international operations and president of the chemicals and plastics operating division. Anderson was elected a vice-president of the corporation in 1969, executive vice-president in 1973, and a director in 1974.

Union Carbide is a worldwide organization that serves a broad group of consumers and industrial customers in more than 100 countries on every continent. The corporation is publicly owned by approximately 154,000 stockholders. At year-end 1975, approximately 106,475 people were employed by the corporation and its majority-owned companies throughout the world.

inside ...

As the Tennessee and Kentucky hills gear for upcoming holidays, and the advent of winter, many activities are noted around the Nuclear Division. Upcoming stories will show the Division's video capabilities, along with other news from the four plants.

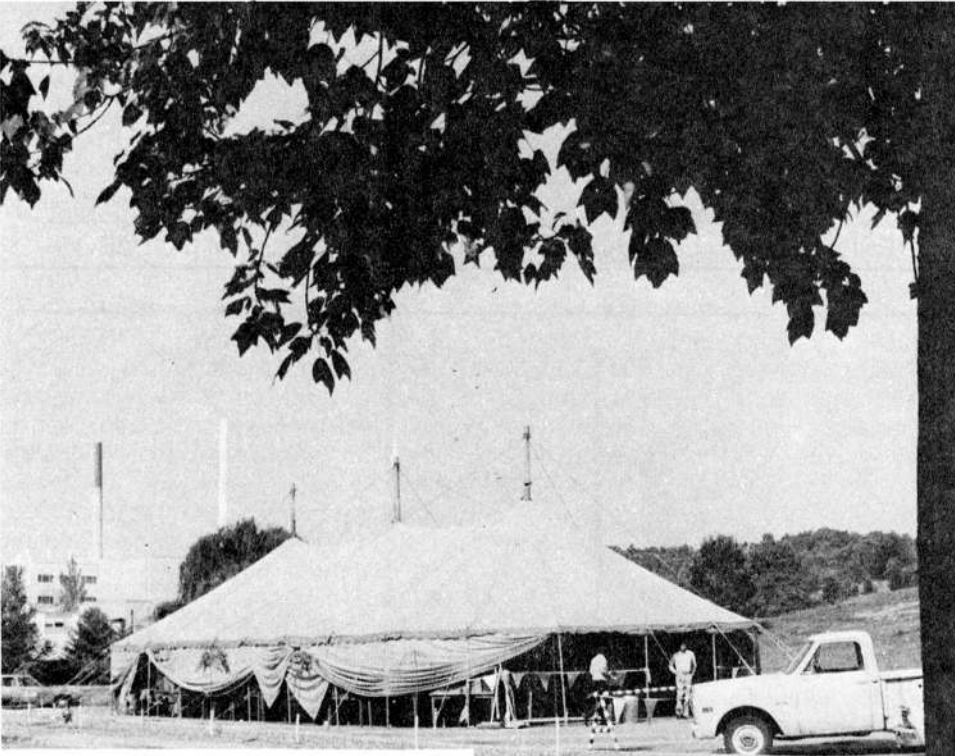
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238TH DIVIDEND

The board of directors of Union Carbide Corporation has declared its 238th consecutive dividend, 62 and one-half cents a share on outstanding capital stock, payable December 1. This was the same dividend paid September 1, 1976. The third quarter dividend brings to a total \$2.50 a share paid in 1976 on shares in the corporation.

Information Meeting held 'under the big top'



Above: Due to a shortage of space indoors at ORNL, the Metals and Ceramics Division held its annual information meeting in this huge 40x80 foot tent.

Bottom right: W. L. Fairhurst, right, of the London Office of Climax Molybdenum Company listens as Phil Maziasz of M&C's Radiation Effects and Microstructural Analysis Group explains how the radiation resistance of type 316 stainless steel can be markedly improved by minor additions of alloying constituents.

Bottom left: Keith Booker, left, and wife Barbara Booker of M&C's Mechanical Properties Group discuss with Bob Stephenson of the Computer Sciences Division the capability and practical uses of the new Mechanical Properties Data Storage and Retrieval System.

The erecting of a huge 40 x 80 foot tent on the ORNL grounds last month lent itself to a number of joking remarks like: "Where's the circus?" "Where are the elephants and clowns?"

Well, the elephants never arrived, nor did the circus or clowns. The tent was the headquarters for this year's Metals and Ceramics Division Annual Information Meeting.

The tent was a big success; so was the information meeting. According to M&C Associate Director Jack Cunningham, 71 visitors and over 1,000 employees strolled through the tent to view the 59 displays and posters.

This was the first time that the Division went to an all-inclusive poster session, curtailing the number of traditional formal talks. Among the advantages offered by the change were freedom of choice on the part of the visitor to select topics and spend more time on subjects of greatest personal interest; immediate feedback to the presentee; and a better opportunity for the Division to involve more of the staff and present more technical information.

Due to the lack of available space at ORNL for such poster sessions, Division management decided to rent the tent from a local business, and erect it in front of Building 4500 North. Not only did the tent attract many people that would not ordinarily attend such technical sessions, it provided a feeling of informality and friendliness to a busy three days.

anniversaries

Y-12 PLANT

30 YEARS

Herbert C. Dickinson, Alpha Five West Shop; and Louis A. Watson, General Shops.

25 YEARS

Clyde W. Wise, J. V. Gilbert Hawkins, Charles E. Wuest, Charles F. Jones, William King, Byron D. North, Robert P. Waldrop, William C. Hoppe Jr., Howard Loveday, John S. Steward, Samuel M. Thompson, James A. Weldon, Lawson L. Wilcoxon, Glen A. Tedder, Charles H. Bowman and Coy N. Crawley.

20 YEARS

James B. Hopkins and Charles C. Niemeier.

GENERAL STAFF

30 YEARS

Margaret R. Wise, Law Department.

25 YEARS

Charles R. Read and Walter E. Prater.

ORGDP

30 YEARS

William E. Brown, Machine Shop Department; Elizabeth B. Richardson, Administrative Services; and Mary C. Denton, Grounds Maintenance Department.

25 YEARS

Harold Bowman, William K. Johnson, Grady E. Lassiter, James R. Gray, Louise T. Burris, John M. Vance, James D. Weaver and Courtney L. Buskirk.

20 YEARS

Roy C. Taylor.

PADUCAH

25 YEARS

Palmer G. Edwards, James O. Dobson, Gene W. White, Bobby E. Corder, J. Deane Tate, Harry D. Copeland, Julian P. Hobbs, John H. McGee, John J. Coil Jr., Edward R. Ransom, Ray D. Howard, Henry Devillez, Claude R. Beverly, Kenneth A. Davis, Jesse W. Hendricks and James S. Garrigus.

20 YEARS

Frances L. Ross.

ORNL

30 YEARS

Jo L. Long, Information Division; James P. Jackson, Engineering; and Harry C. Savage, Chemical Technology Division.

25 YEARS

James M. Odom, Jr., Rodney W. Knight, Wilma B. Greene, James L. Scott, Raymond G. Wymer, William E. Davis and Betty P. Freels.

20 YEARS

James A. Barker, Robert E. MacPherson Jr., William H. Culbert, Katherine P. Jones, Billy L. Greenstreet and John J. Manning.

patents granted

To Thomas C. Quinby, ORNL, for "Neutron Dosimetry."

To Theodore R. Mueller, ORNL, for "Automatic Electrochemical Ambient Air Monitor for Chloride and Chlorine."

To Charles D. Scott, ORNL, for "Elution Electrophoresis."

To David O. Campbell, ORNL, for "Recovery of Cesium and Palladium from Nuclear Reactor Fuel Processing Waste."

Savings Plan-Personal Investment Account

Recent unit values:

	Fixed Income Fund	UCC Stock	Equity Investment Fund
August 73	10.0000	34.7688	10.0000
December 73	10.2444	31.8170	9.3602
December 74	11.0438	40.3009	6.4354
December 75	11.9880	58.7886	7.8231
July 76	12.6001	65.5359	8.6664
August 76	12.6898	64.0878	8.6330
September 76	12.7800	64.2020	8.8021

Note: Fixed Income Fund unit values reflect interest additions to achieve the guaranteed effective annual interest rate of 8.85% for 1976. Union Carbide stock values are the average cost of stock purchases during the month plus brokerage charges. Equity Investment Fund unit values represent the month-end market value of securities held by the Fund. Dividing the total value by the number of units in the fund establishes the month's unit values—and the price at which new units are added that month.

OR plants go over the top in UW contributions

We did it! For the second time in history, Nuclear Division employees at the three Oak Ridge plants have exceeded their United Way goal—this year by eight percent! The final report shows that more than \$580,000 has been pledged or contributed to help people in the various communities. This is about \$80,000 more than was contributed last year.

A combined goal of \$535,000 was officially set for the Oak Ridge facilities: ORGDP—\$175,000; Y-12 Plant—\$150,000; and ORNL—\$210,000.

Each of the three plants made an outstanding showing this year. Oak Ridge Gaseous Diffusion Plant employees, who had attained more than 100 percent of their goal after the first campaign week, finished up with 113 percent (\$198,000). A total of \$162,916 (109 percent) was contributed by employees at the Y-12 Plant. Oak Ridge National Laboratory staff contributed more than \$219,000, which represents 105 percent of their goal.

The \$15,000 contribution made by the Corporation to Anderson County agencies would bring this year's total to more than \$595,000.

The bulk of the contributions will go to one of the five major counties in which most of the approximately 16,000 Oak Ridge employees live. Allocations by county are as follows: Anderson County, \$310,127; Knox County, \$149,952; Roane County, \$81,899; Loudon County, \$27,046; and Morgan County, \$21,085. Approximately \$5,000 will be distributed to other counties.

"It is really a good feeling to reach a goal, but what is more important is the joy of knowing that the money contributed will benefit hundreds of people through services offered by United Way agencies," said Ron Ragland, general chairman for the drive in Oak Ridge. "On behalf of the



GOOD NEWS, GOOD NEWS—Employees in the Y-12 plant got a double dose of good news last month in the lawn outside the cafeteria, a sight to brighten up October's blue weather. The United Way sign on the left proclaimed that Y-12 had exceeded its 1976 goal, and the sign on the right shows safe working hours in excess of six million. Unfortunately, the safety record ended last week with a lost-time injury.

people who will be helped by this generous contribution, I wish to thank all the employees who organized, worked and contributed to the Nuclear Division's United Way drive. You made this year's campaign a success for all of us."

A report will follow on the drive in the Paducah plant.



6084-76



Representative of the many Nuclear Division divisions and departments reaching 100 percent of their goal in this year's United Way drive is the Decontamination Laundry group in ORNL's Operations Division. From left are Bill Clifton, laundry supervisor; Elnora Benton, Richard Massey, Ruby Price, Charles Gaddis, Claude Wade, Donald Floyd and Jim Chesney.

Metals, Ceramics exhibits gather honors

Several exhibits prepared by Oak Ridge National Laboratory's Metals and Ceramics Division personnel won honors recently. Terry N. Tiegs and Tommy J. Henson's entry was awarded first place in the optical micrograph division at the American Ceramic Society's 1976 ceramographics exhibit held recently in Cincinnati. Their exhibit is entitled **Distribution of Uranium, Cerium, and Cesium in Irradiated TRISO-Coated 85% UO₂—15% UC₂ Fuel Particle**. Victor J. Tennery and Henson's entry on **Surface Topography Determined by SEM of Helium-Ion-Sputtered Niobium Carbide** won an honorable mention in the electron microscopy class.

Three awards were won by M&C personnel in Seattle recently at the 1976 international metallographic exhibit, co-sponsored by the American Society for Metals and the International Metallographic Society.

James Bentley, Edward A. Kenik and Ray W. Carpenter won first place in the unique, unusual, and other techniques class for their entry on **Analytical Electron Microscopy**.

Distribution of Uranium, Cerium, and Cesium in Irradiated TRISO-Coated 85% UO₂—15% UC₂ Fuel Particle, by Tiegs and Henson, was judged second in the optical microscopy class on petrographic, ceramographic, and cermet materials.

Nicholas H. Packan received an honorable mention for his entry on **Stages in the Devitrification of a Grain Boundary Phase in Uranium Dioxide**.

All five entries will become a part of the sponsoring societies' traveling exhibitions.

THANKSGIVING HOLIDAYS

Nuclear Division employees are setting their sights on a big upcoming two-day holiday, as the nation will observe Thanksgiving Day. Thursday and Friday, November 25, 26, will be official holidays, and no employee will be required to work unless his/her presence is required by continuous operations or plant security.

safety scoreboard

Time worked without a lost-time accident through November 4:

Paducah	37 Days	451,000 Man-Hours
ORGDP	27 Days	865,059 Man-Hours
Y-12 Plant	3 Days	108,000 Man-Hours
ORNL	49 Days	1,113,966 Man-Hours

'Data delivery' puts miles on Timmons' van

It happens sometimes when you're having lunch in the plant cafeteria, listening to the cash registers ring as tray after tray is carried off into the crowd; or perhaps as you head for the parking lot at the end of the day, surrounded by employees talking and joking. The thought suddenly occurs: who are all these people, and what are they doing here?

Employment in the Nuclear Division is now past 18,000; and while we all know our own jobs and, to some extent, those of the people we work closely with, many of us don't really know who the roads and ground workers are, what a development engineer does, or how a technical reports assistant spends his or her day.

Beginning with the sketch below, we plan to devote a little space in each issue to getting acquainted with our co-workers and the jobs they do. Next time you're standing in that cafeteria line, look around—we've all got names and faces after all!



Timmons stacks the "jobs" (computer printouts and cards) for one of his stops by the driver's seat in his van before beginning his daily rounds.

Freddie Timmons daily drives a familiar-looking, medium-sized gray van along the roads of Oak Ridge's ERDA reservation, but his "passengers" are mainly paper.

Employed by the Transportation Department of the Plant and Equipment (P&E) Division at ORNL, Timmons is one of seven computer couriers for the Computer Sciences Division. He comes to work at 6 a.m. and is faced with a mountain of "jobs" (computer printouts and cards) stacked on metal shelves.

"Some mornings, I have as many as 200 jobs to deliver," says Timmons. "Before I can start my rounds, I have to log in and sort the jobs according to building."

At each building on his route Timmons delivers his jobs and picks up new ones to be delivered. "For big stops like ORNL's Solid State Building, I use a wire cart to wheel my load," he comments. "Saves time and an extra trip."

The seven computer service couriers drive more than 300 miles a day making their rounds, says Ted Sylvia, P&E Transportation foreman. They pick up and deliver at all three Oak Ridge plants.

The couriers are proud of their track record for being punctual. "We hit on our regularly-scheduled times within 15 to 20 minutes," Timmons says with a grin. "Of course, that depends on the number of jobs to be picked up and delivered."

Timmons, who has been in the Plant and Equipment Division at ORNL for 18 years, has worked as a computer service courier for five. He and his wife, Gertrude, live at 2200 S. Benedict in Oak Ridge. They have seven sons, Ronald, Bobby, Alvin, Charles, Fredrick, Wayne and Barry.

The other computer service couriers are Roger D. Bray, Ed Bryant, Sebra E. Foust Jr., James Moulden, Coy L. Bunch and William T. Cagle.

Cuttings set next two weekends

Two more firewood cuttings are upcoming on the Oak Ridge reservation this weekend, November 12 and 13, and next, November 19 and 20.

As in the past, cutting will be by permit and in designated areas only. The \$5 permit fee (good for day of issuance only) for each individual or family is charged to defray costs of personnel needed to maintain the cuttings.

Dennis Bradburn of ORNL's Environmental Sciences Division, who is supervising the cuttings, says they will be behind logging operations and will include good hardwood tree tops. There will also be some low-quality hardwood trees to be cut down, Bradburn added.

Persons interested in participating should meet at the intersection of the Oak Ridge Turnpike and Highway 58 (the "Y" near ORGDP) between 8 and 9:30 a.m. on any of the appointed days. Members of the staff of the Nuclear Division's Forest Management Program, which administers the program, will accompany groups to the cutting areas; road access will be provided for private vehicles to remove firewood after it has been cut.

Children under 12 will not be permitted in the cutting area, due to safety requirements.

For additional information on the cuttings, call Bradburn at extension 3-1266.

next issue ...

The next issue will be dated November 25. The deadline is November 17.

Y-12's Fabrication cited for 5-year safety record

An outstanding achievement award has been presented the Fabrication Division of Y-12 recently. Jack M. Case, plant manager, and Clarence E. Johnson, safety director, cited the outstanding record set by the division over the past five years.

Last month the division had amassed 11,315,794 man-hours in safety operations, a total of 2,068 days—and the record is still in progress.

Despite a diversity of activities, including operations which deal in machining and tooling, welding and other miscellaneous shop functions, the division has kept an accident-free record which began in February, 1971.

In addressing division representatives, Case pointed out that the record achievement was attained through the efforts of each employee.

Keith Kahl, division superintendent, accepted the citation for all members of the Y-12 division.



Y-12 FABRICATION DIVISION HONORED—For working in excess of 11 million man-hours without a lost-time accident, Y-12's Fabrication Division has received an outstanding achievement award. From left are Jack M. Case, Y-12 Plant Manager; Keith G. Kahl, division superintendent; Clarence E. Johnson, Y-12 safety director; and others representing part of the division: Otis R. Garmon, Harvey Turman, Eula Gillispie, O. K. Sergeant, Tommy R. Webber, David M. White, David Gillespie, Edwin R. Eastwood, Lemar Bender, Douglas E. Underwood, F. V. "Joe" Tilson, Claude E. Hensley and Harold E. Alvey.

retirements



Hobert B. Bowen
Plant & Equipment,
ORNL
32 years service



Truman C. Cash
Plant & Equipment,
ORNL
21 years service



Arthur P. Fraas
Energy, ORNL
26 years service



Mary P. Haydon
Physics, ORNL
17 years service



Kenneth E. Caughron
Utilities, Y-12
31 years service



Harry A. Johnson
Production Services,
Y-12
8 years service



Fred B. Matthews
Research Services,
Y-12
26 years service



Leon H. Gooch
U-235 Separation,
ORGDP
30 years service



William H. Hall
Technical Services,
ORGDP
40 years service



Carmon E. Houston
Security and Plant
Protection, ORGDP
32 years service



James J. Petruzzi
Operations, ORGDP
32 years service



Helen Smith Saylor
Engineering, ORGDP
31 years service



Earl E. Stout
Computer Sciences,
ORGDP
21 years service

division deaths



Mr. Alsip

James H. Alsip, in Paducah's Machine Shop, died recently at his Route 1, Vienna, Ill., home. Mr. Alsip joined Union Carbide early this year.

Survivors include his wife, Linda Alsip, and children, James Lynn, Tracy Allen and Brian Keith Alsip.

Funeral services and burial were held in Vienna.

Five-volume Energy R&D Inventory available to all employees

by Laura Eubanks

Though many may not realize it, all Nuclear Division employees have literally at their fingertips access to descriptions of all current energy and energy-related research and development projects in the United States.

This information, entitled the "Inventory of Energy Research and Development," was prepared by Oak Ridge National Laboratory for the Congressional Subcommittee of Energy Research, Development and Demonstration, chaired by Rep. Mike McCormack. (The Subcommittee is part of the Committee on Science and Technology and the Energy Research and Development Administration.) Issued by Congress, the Inventory has been prepared with the support of the National Science Foundation (NSF) and ERDA.

Five volumes

The current Inventory, printed in January, 1976, consists of five volumes. The first three volumes contain information on energy research and development projects, the fourth contains the indexes and the fifth volume contains the summary tables of expenditures.

The Inventory covers research and development in five energy areas:

- All types of energy sources, including coal, petroleum, natural gas, oil shales, nuclear fuels, solar, geothermal, hydroelectric, synthetic and solid waste;

- Electric power, which takes in generation, transmission and distribution, and storage;

- Energy uses and conservation, which covers heating and cooling, transportation, agriculture, etc.;

- Economics and legal aspects; and

- Environmental and health aspects.

National survey

Information for the Inventory is obtained through a national survey of those organizations that sponsor or conduct energy research and development. Information is solicited from industry, the federal government, federally-funded research and development centers, nonprofit organizations, universities and state and local governments, according to Gloria Caton, director of the Energy Research, Development and Demonstration project.

The project is administered by the Information Center Complex (ICC), directed by Gerald Ulrikson. The ICC, part of the Laboratory's Information Division, provides information on major research areas to ORNL, ERDA and other government agencies.

According to Caton, the respondents to the survey are asked to give project titles, the name of their research institution and the investigators and sponsors. They are also asked to provide information on the research location, project duration and description, technical personnel involved, expenditures, publications resulting from their research and the research type (whether basic, applied, or developmental).

These are arranged according to the five energy areas, with the research institutions involved listed alphabetically under the different classifications. If the project refers to more than one subject area in the Inventory, cross reference numbers are given so all information on a topic can easily be found.

Available to all

The six indexes in Volume IV are arranged by keywords, the research institution, sponsors, persons in charge, locations, and an index of permuted titles. ("Permuted" refers to the arrangement of titles in all possible ways, using each main word as the key term.)

Volume V, the summary tables of expenditures, shows which group spent how much on what projects, Caton said. The tables relate expenditures to the type of sponsor, performing organization, research, subject categories and research location. Combinations of these classifications are also listed. In addition, these tables show annual expenditures in five energy areas.

Copies of the latest Inventory (for 1973-1975) are available in the Central Research Library at ORNL, where any Nuclear Division employee can look up desired information. The information contained in the Inventory may also be obtained from the computerized information retrieval system ERDA/RECON. An ERDA/RECON terminal is located in Room 191 near the Central Research Library at the Laboratory and is complete with beginners' instructions. By using the data base stored in RECON, employees can perform computer

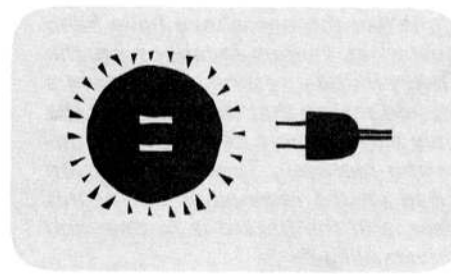
searches of all the information in the Inventory on a given topic.

ORNL employees working with the Inventory also answer world-wide inquiries about this computerized data base. "For example, we got a call recently from the city of Reykjavik, Iceland," Caton said. "They needed some general information on the Inventory and specific information on research using methanol as a motor fuel."

Other uses

In addition to providing information, the "Inventory of Energy Research and Development" may also be used as a directory of researchers and for compiling mailing lists. "By having the Inventory, duplication of research on energy and energy-related projects can be prevented," Caton explained. "It also helps identify gaps in energy research and development and can give ideas for new research that could be conducted. The Inventory has even been used for contacting potential speakers and employees."

The current Inventory, the third edition, has nearly doubled in size during the past two years. It contains 8,100 entries, whereas the second edition, printed in 1974, contained 4,900 entries. The first edition, issued in 1972, had 4,375 entries.



recreationotes

APPLICATION FOR TICKETS

Requests MUST Be In By November 24

PADUCAH CARBIDE CHILDREN'S CHRISTMAS PARTY

(For Children Ages 2-9)

SATURDAY, DECEMBER 11, 9 A.M.

(Doors will open at 8:30 a.m.)

ARCADE THEATRE, PADUCAH, KY.



Employee's Name _____ Badge No. _____

Home Address _____

(Please Print Street Address or RFD, City and Zip Code)

Number of your children who will attend the party (please list):

(BOYS)		(GIRLS)	
Name _____	Age _____	Name _____	Age _____
Name _____	Age _____	Name _____	Age _____
Name _____	Age _____	Name _____	Age _____

List names, ages and sex of children very accurately. The information will be used to bring present records up to date.
NOTE: Fill out form completely and return as soon as possible, but not later than November 24, to the Recreation Office, Union Carbide Corporation, P.O. Box 1410, Paducah, Ky. 42001. Tickets will be mailed to parents at their home addresses.

Christmas Party

A Christmas party for Union Carbide children at the Paducah plant is early this year, Saturday, December 11. Festivities get underway at 9 a.m., with the door of the Arcade Theatre opening at 8:30.

As usual, there's a lot planned for all the youngsters. Deadline for submitting applications is November 24, so employees in the Paducah plant should act now. The above application will appear again in the next issue of **Nuclear Division News**.

Please give the ages of each child . . . and attach another piece of paper if the above application is not sufficient.



MEMO TO MOTORISTS—Just a reminder, as the mornings grow darker—and are often made more so by fog and rain: deer are usually more active during early morning and late evening hours. Although signs like the one above have been posted at various locations on the Oak Ridge reservation, drivers should realize that these are not the only places where deer may leap onto the highway. Twelve have been killed on the reservation so far this year, and the hazard is to deer and drivers alike.

Physical fitness

The Recreation Department is planning a Physical Fitness Program, to begin in January if enough interest is shown. These activities will be held in the Oak Ridge gymnasiums. Interested persons should contact the Recreation Office, telephone 3-5833.

Paducah golf

Neither sleet, snow, rain or cold wind can stay the Carbide golfer from his (her) appointed round . . . Ninety six of the faithful gathered at the Calvert City Country Club and pounded out an amazing number of sub-par scores.

Jerry Neal, Hester Albritton, Bob Siegfried, Bob Holler and Becky Clark posted a winning eight under par, just shading teams captained by Marshall Jones and Jim Freeman closely followed by Jake Piercy and Phil Brown. Ten teams were closely bunched with none over par.

The "social hour" of hot coffee followed in the club house with the rounds being reconstructed and replayed. In fact the 35 degree temperature and 25 mile wind did nothing, for some of the players went back to prove to themselves and others that they could, or could have, done it.

A good time was had by all, and everyone is looking forward to the annual "SNOW BIRD" to be held at Paxton Park during the latter weeks of November or early December, or the worst weather we can find whichever comes first.

Paducah photo exhibit

Plans are being made by the Photography Committee at Paducah to have another exhibit in January, 1977. The response in 1976, plus the quality of work exhibited, was very positive.

Shutterbugs are urged to put those prints and negatives aside. Further details will follow in **Nuclear Division News**.

PADUCAH DANCES

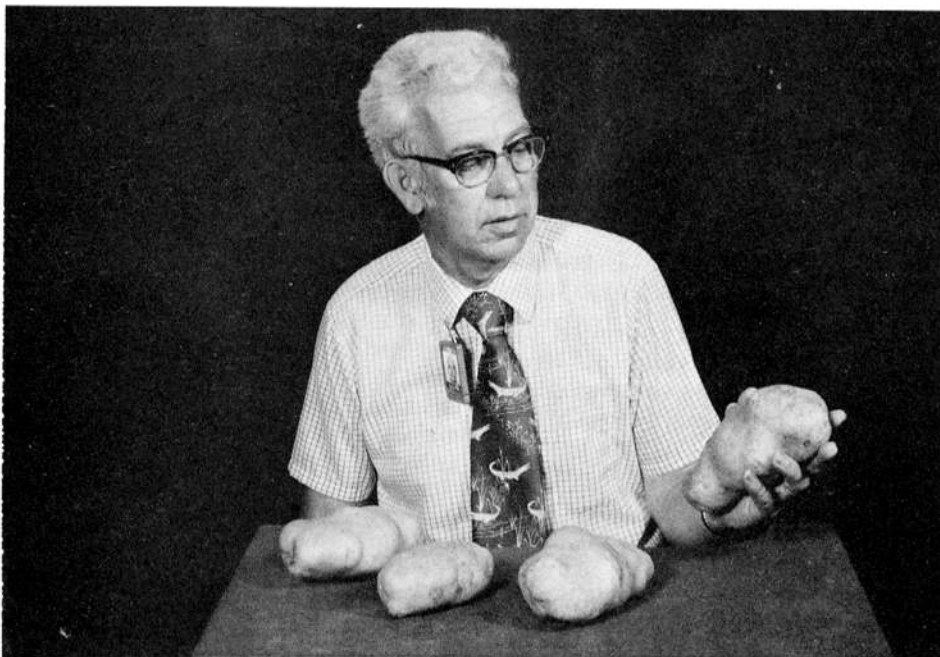
The Paducah Civic Center was all fancied up recently in red, white and blue for the annual fall dance. An eight-foot Uncle Sam greeted the couples as they arrived for the dance. The dance committee did an outstanding job of planning, decorating and organizing the frolic that began at 9 and continued until 1. Carbiders enjoyed every bit of it and have accepted the entertainment as a tradition at the Paducah Plant.

Hines scores ace

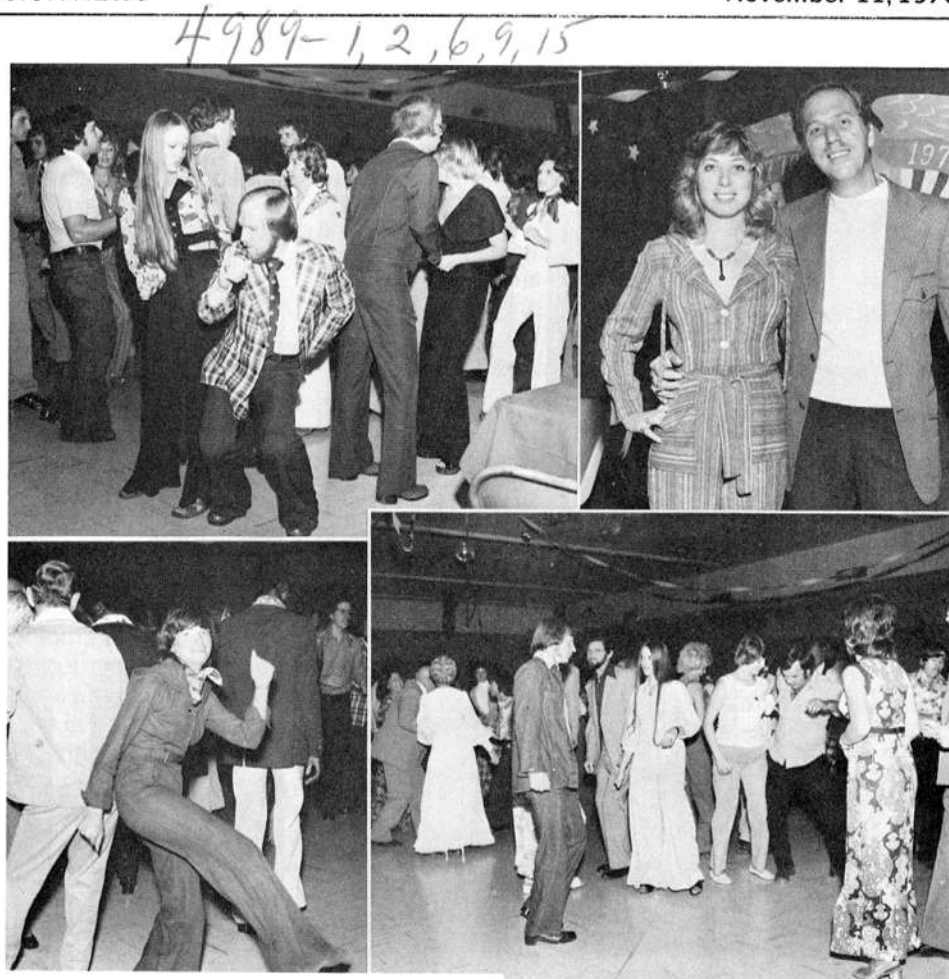
Art Hines, Y-12 Benefit Plans, recently scored his third hole-in-one at the Oak Ridge Country Club. It was on hole 12, a 160-yarder, three par, that the well-known golfer scored his ace, using a six-iron. He was playing in a foursome with Bob Hart, Ward Foster and Bill Reynolds.

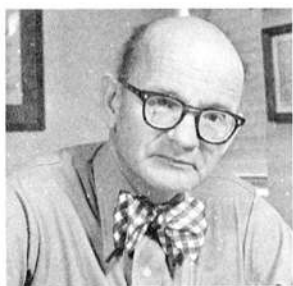
Winter park hours

The Clark Center Recreation Park will maintain hours from 5 a.m. until 11 p.m. until April 1. Park users are advised that drinking water and rest room facilities are not available at the park during winter months.



LUSH SEASON—Lawrence G. Losh, physical testing instructor in the Training and Technology Project in Y-12, gives further evidence of the lush season in East Tennessee gardens. He produced these whopper Kennebec potatoes, holding one that weighed more than four pounds. He said the more he dug, the bigger they got!





medicine chest

by T. A. Lincoln, M.D.

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 20, Y-12, or call the news editor in your plant, and give him or her your question on the telephone.)

QUESTION: "In your opinion, will a cure of cancer be a gradual process rather than a dramatic 'breakthrough'? It seems that a great deal of progress is being made (albeit rather slowly, it seems) in chemotherapy, radiation, surgery, etc., treatments for malignancy."

ANSWER: Cancer is not a single disease, does not have a single cause, does not have a single mechanism for development or spread and therefore cannot be expected to have a single cure. The term cancer, as used by most people, refers to any malignant tumor or blood disease. It is a wastebasket term used only for general discussion.

Each malignancy is typically named for the organ which is primarily involved, but such a designation has no meaning as far as prognosis is concerned. For example, a cancer of the lung could be an epidermoid cancer which has a remarkably good prognosis if located out in the periphery of the lung and if discovered and removed before it reaches two centimeters in diameter. An oat-cell cancer of the lung is probably a systemic disease from the onset, and therefore surgery is not possible and the only hope is control with chemicals and/or radiation.

Conditioned to 'cures'

During the first half of this century, dramatic "cures" were usually related to infectious diseases caused by a single type of bacteria or viruses. Unfortunately, the public became conditioned to believe that all diseases had a single cause and therefore a single cure. Antibiotics could cure many infections. Vaccines could frequently be developed to prevent virus infections.

Cancer, however, has many causes. Heredity and familial susceptibility play a key role in some cancers but not in others. Familial susceptibility may be genetic, or it may be related to common exposure to potential cancer-causing agents in the environment.

The environment is blamed for about 80 percent of today's cancers, but many of them may be related to exposure to many different agents in the air we breathe in the city, the food we eat, the alcohol we drink, the tobacco we smoke, the medicines we take, where we work, in our hobbies and in the life styles we lead. Hormones and sexual factors, past or present infections or injuries and the presence of non-malignant de-

generative diseases all influence cancer incidence, the type of cancer and prognosis.

As you can see, in all that maze of interrelated factors, it is extremely unlikely that any one dramatic breakthrough will occur. A magic drug that cures one type of cancer may be totally ineffective in another type.

Controls will be gradual

The partial or complete control of many cancers has come without knowing what causes it. New ideas for treatments sometimes come from almost accidental findings. Sometimes they are the result of shrewd observation and study of large numbers of cases and methods of treatment. Occasionally a better understanding of a cause or a mechanism of growth of a cancer will lead to a new treatment.

Yes, I believe "cures" or "controls" of cancers will come gradually. The term "breakthrough" should be discarded from our vocabulary. It implies a sudden miraculous discovery. Cancer research is a backbreaking, exhausting "blood, sweat and tears effort." New discoveries occur because hundreds of thousands of hours have been spent finding out that some idea doesn't work. If we keep working, every now and then we can expect to find an idea that does work.

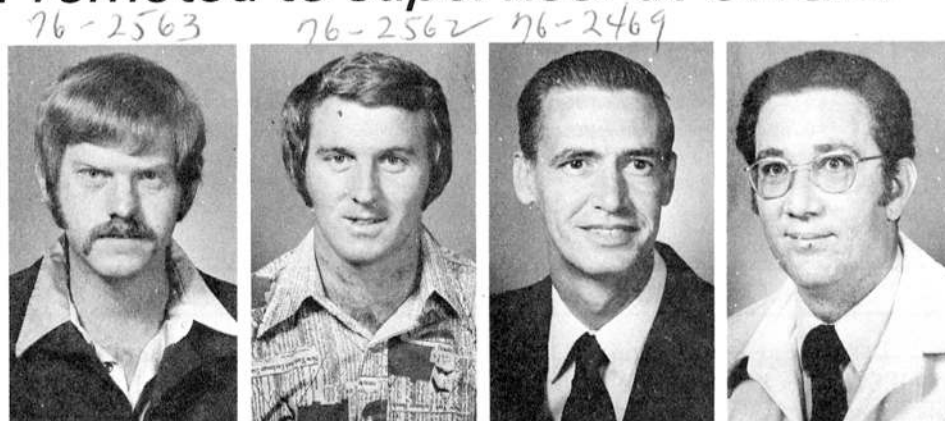
QUESTION: "A physician I know told me that the CPR Program is really saving lives. Rather than show my ignorance, I did not ask what it stood for, but understand it has something to do with emergency treatment for heart patients. Is there any plan to instruct employees in this... in our safety meetings, etc., as we did with mouth-to-mouth resuscitation some years ago?"

ANSWER: CPR stands for cardiopulmonary resuscitation. It involves the rhythmic compression of the external chest in order to squeeze blood out of the heart and into the circulation. It can safely be performed only when the heart has stopped beating or is fibrillating (quivering) in a helpless fashion. It must be accompanied by mouth-to-mouth rescue breathing.

Little knowledge dangerous

Painful experience has taught the American Heart Association and the American Red Cross that "a little learning can be a dangerous thing." Even though CPR is basically simple, few people can develop proficiency

Promoted to supervisor at ORGDP



Loving

Proffitt

Rider

Ward

Four new supervisors have been named at ORGDP, as Lyndell L. Loving is promoted in Barrier Manufacturing; George E. Proffitt is named in Fabrication and Maintenance; and Thomas F. Rider and John D. Ward III are elevated in Barrier Manufacturing.

Loving, a native of Lake City, joined Union Carbide in 1974. Prior to that he was with the Continental Textile Corporation.

Mrs. Loving is the former Bobbie Phillips, and they live at 630 Woodland Drive, Clinton. They have a daughter, Melissa.

Proffitt, who was born at Speedwell, attended the College of Automation, and will graduate shortly from the University of Tennessee with a degree in business administration. Prior to

joining Union Carbide, he worked with **Look** magazine as a proofreader, with United Parcel Service, and served in the U.S. Army.

He and his wife, Mary Ann, live at Route 17, Emory Road, Knoxville.

Rider was born in Tate, Ga., but grew up in Oak Ridge. He has been at ORGDP nearly two years.

Mrs. Rider is the former Barbara Wigginton, and the couple lives at 251 Highland Avenue, Oak Ridge. They have a son, Allen.

Ward, who has been with Union Carbide for more than a year, worked for General Motors prior to joining the ORGDP staff. He is a native of Rockwood.

Married to the former Sandra Fulks, the couple has two sons, Roger and Craig. Their home is at 535 Greenwood Drive, Rockwood.

with a brief demonstration and practice on a mannikin. In many emergency situations, members of the general public have started resuscitation when it shouldn't have been, have performed it improperly or have stopped too soon.

CPR now requires four to eight hours of demonstration and practice under the instruction of a certified instructor. The participant must demonstrate proficiency before he/she can be formally certified. Periodic review training sessions are also necessary.

Ideally, everyone should have the opportunity to demonstrate their skill during an actual emergency. At ORNL, several rescue team members have provided vital assistance during prolonged CPR with a heart attack victim. Most of them required some coaching before they were really effective. Once they got a few minutes of actual experience, they were just as good as the experts.

Because of the amount of time required to properly teach CPR, it has not been possible to offer it to all employees. At ORNL, and I believe at all the Nuclear Division plants, the emphasis has been to train rescue, first aid or emergency squads, security and firefighter staffs and medical personnel.

Anyone willing to take the time can get training through the East Tennessee Heart Association (call 546-8681 Knoxville for East Tennessee training schedules) or your local American Red Cross chapter (483-5641 in Oak Ridge, 524-3031 in Knoxville). Although definite schedules for training courses are established ahead of time in some locations, others just wait until enough people indicate they want training and then they get one of their certified instructors to teach the course.

wanted



ORNL

RIDERS to join Knoxville Commuter Van Pool from West Knoxville, I-40 Papermill Road exit area or Walker Springs Road exit: R. L. Pearson, plant phone 3-1875; home phone 588-9949.

CAR POOL MEMBER, West Outer Drive-Pennsylvania-Hillside area, Oak Ridge, 8:15-5. Call Tom Burnett, plant phone 3-6939, home phone 483-1975; or Dick Strehlow, plant phone 3-1175, home phone 482-3240.

RIDERS for van pool, Beaver Creek-Powell area or Karns area, straight days, 8-4:30, either portal. Gary Wright, plant phone 3-6441; home phone 947-0241.

CAR POOL MEMBER, East Knoxville Burlington-Mascot area to West Portal, 8-4:30. D. A. Treadway, plant phone 3-1851; home phone 637-3164.

Cold weather energy-saver

Setting nighttime temperatures back can reduce heating costs significantly. Consider the advantages of a clock thermostat which will automatically turn the heat down at a regular hour before you retire and turn it up just before you wake.

question box

If you have questions on company policy, write the Editor, Nuclear Division News (or telephone your question in, either to the editor, or to your plant contact). Space limitations may require some editing, but pertinent subject matter will not be omitted. Your name will not be used, and you will be given a personal answer if you so desire.

Pay range information

QUESTION: Why is the official policy regarding the change in pay grades, position in the range, and effective times between raises for monthly salaried personnel different for ORNL and the other plants? Specifically, why have group meetings been held at Y-12 to explain the salary policy and ORNL will only tell the relationship to the midpoint of the grade if and when the question is specifically asked of the supervisor.

ANSWER: The policy is the same at all installations. Each employee is entitled to know his/her job title, rate range, and position in the range. Some divisions at ORNL have taken the initiative in communicating this information to each employee while others have only responded to specific questions. In any case, the information available is the same in all ORNL divisions and throughout the Nuclear Division.

In-house certificates

QUESTION: Recently, there was an article in the **Nuclear Division News** regarding in-house certificates awarded to ORNL employees completing courses in the "In-House Development Opportunities for Administrative and Technical Support Personnel Program for 1975-76." There are at least two of these courses that I would be interested in taking. Why is this program not available to Y-12 personnel? A similar program is available in Y-12 for exempt personnel.

ANSWER: It is true that the program you referred to is an exclusive ORNL activity in which the other Nuclear Division installations are not participating. However, each of the other installations conducts appropriate training for administrative and technical support personnel in accordance with their particular needs.

Spouse option plan

QUESTION: My pension retirement income is \$420 per month should I retire now. The spouse option would reduce this monthly amount to \$364. When I die, why does my wife only receive 50 percent of the reduced amount, instead of 50 percent of the original retirement income of \$420 per month?

ANSWER: The pension formula provides a benefit payable to you for your lifetime. At your retirement an annuity is purchased to provide this benefit, the cost of which is based on your life expectancy. When you elect a survivor's benefit, you are asking that benefit payments be spread over two lifetimes rather than one. Since the total amount of the expected benefit payout must be the same, the result of making more payments (two lifetimes, rather than one) means that the monthly payments must be less. It would, of course, have been possible

to have the survivor's benefit be 50 percent of the original pension amount, but since the total expected payout cannot change, the result would have been a much smaller pension payment to you during your lifetime.

Income tax withholding

QUESTION: Under present policy, an employee who has an insufficient amount withheld from his pay to meet yearly tax liability is required to declare extra minus deductions. Most large companies permit employees to specify an even dollar amount to be deducted to satisfy that need. The extra exemption method is both cumbersome and inaccurate for the individual—and must be extremely bothersome and time-consuming for the accounting departments. Why can't we have the option of a fixed dollar amount deduction?

ANSWER: The option you suggest could be provided, but to do so would involve additional computer programming, forms, and expense. The present method (declaring extra minus deductions) provides employees a reasonable amount of flexibility in authorizing income tax deductions. It has been in use for many years and has apparently met the requirements of most employees.

Stale merchandise

QUESTION: For the last few weeks, I have been noticing that the merchandise in the area canteens has been outdated or stale. I asked one of the men filling up a vending machine why he couldn't put in merchandise that wasn't expired or past its freshness date stamped on the package. He said he could only put in what they gave him. Is there some way to get the vending machine people to put in fresh merchandise?

ANSWER: Industrial Vendors, the current vendor, is required under the terms of our contract with them, to furnish, service and operate coin-operated vending machines at the ORGDP, Y-12 and ORNL installations. The products are to be fresh and of high quality. "Freshness dates," when applicable, are to be honored. It is the responsibility of the route operator to see that this is done.

Any problem should be reported directly to the vendor by calling extension 3-4441. If the problem is not satisfactorily resolved in this manner, report the complaint to the Cafeteria Manager at your installation who coordinates the vending services there.

Maternity leave "pay"

QUESTION: An article in the October, 1976, issue of **Better Homes and Gardens** on the legal rights of employees stated that women on mater-



Jackson B. Browning, director of health, safety and environmental affairs for Union Carbide, recently presented the Paducah Plant employees with the corporate Safety Achievement Award in recognition of 1,744,771 hours without a disabling injury. Accepting the award was Clyde C. Hopkins, Plant Manager. From left are James O. Dobson, president of UPGWA-Local 111; Hopkins; Johnnie B. Thomason, president of OCAW-Local 3-550; and Hugh G. Coltharp, safety department head.

nity leave have the same rights and benefits as any other employee who is off sick; i.e., getting paid while away from the job. In light of this new law, is Carbide planning to change its present "maternity leave" policy?

ANSWER: A similar question was answered in the August 7, 1975, issue of the **Nuclear Division News** as follows:

"Whether or not a pregnancy is an illness, or at least should be so considered, is a matter of controversy. The issue is now under court review. The position of most employers is that it is not, in fact, an illness. It is expected that the case will be heard in the Supreme Court."

Naturally, we will comply with the findings of the Court. Current update: the U.S. Supreme Court is considering this issue during the present term in the case of **General Electric Company vs. Gilbert** and presumably a decision will be forthcoming within the next year.

wanted



Y-12 PLANT

FORM or JOIN CAR POOL from Norwood area, Knoxville, via Clinton Highway, to North Portal, straight day. Mary Cole, plant extension 3-5993, home 687-6000.

RIDE WANTED from Forestal Drive, Tazewell Pike area, Knoxville, to West Portal, straight day. Lisa Cooper, plant extension 3-7385, home 688-1986.

ONE CAR POOL member (with car) from Cedar Hills section, Kingsley Road, Oak Ridge, to any portal, straight day. J. P. Seagle, plant phone 3-7718, home phone 482-2082.

JOIN CAR POOL from Wilson Road, West Haven section, Knoxville, to North or Central Portal, straight day. J. W. Melton, plant phone 3-7705, home phone Knoxville 637-1156.



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NUCLEAR DIVISION
P. O. BOX Y, OAK RIDGE, TENNESSEE 37830

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